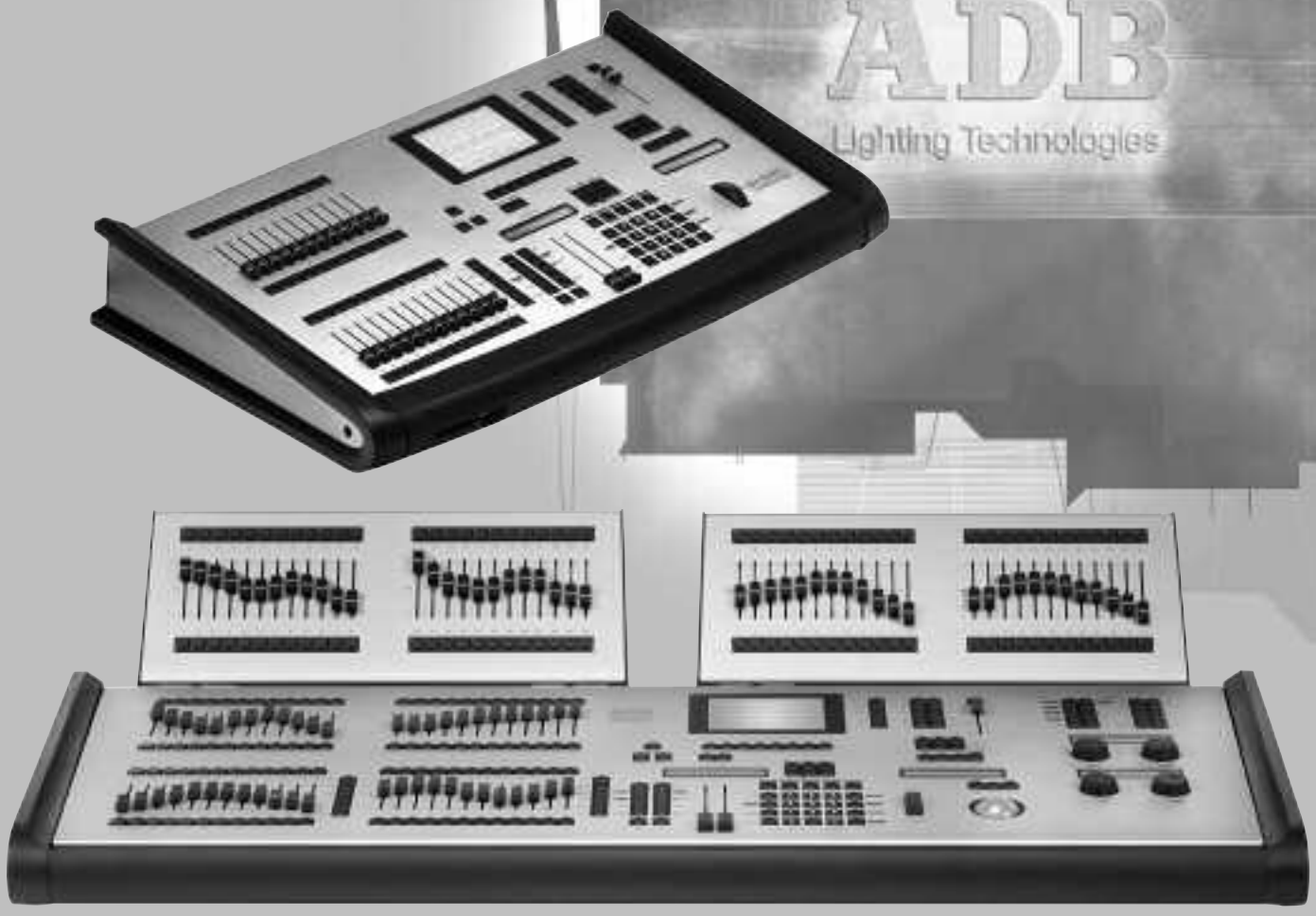
MENTOR
MENTOR XT

User Manual
Issue 1.0



ADB
Lighting Technologies

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1. Introduction

1.1 Delivery and Unpacking

As soon as you receive your equipment, open the boxes and inspect the items received. If you discover any damage, contact the carrier immediately and make any necessary claim for the problems discovered.
The equipment was checked before being packed left our factory it in perfect condition.
Check that the equipment supplied to you corresponds to the consignment note and that this corresponds to your order. You will find the references of your desk on an identification label affixed to the rear panel.
If there is any discrepancy in the order and delivery, contact your supplier immediately who will clarify the situation to your full satisfaction.

Permissible storage conditions:
Temperature: -10 to +50° C: variation rate: 20°/hour
Relative humidity: 20 to 80 % without condensation.

1.2 Preparing the Desk Location

The surface of your work area should be smooth, level and sturdy.
Make sure that there is enough clearance around the desk to:

- open the desk
- access the rear connections
- allow air circulation around vents to prevent the desk from over-heating.

1.3 Desk

The MENTOR and MENTOR XT desk is a professional lighting console with, it is Class I equipment designed and manufactured to the EN60950 standard.
THIS EQUIPMENT MUST BE EARTHED.

No special provisions need to be made for the installation of the equipment. The room in which the equipment is to be installed must be clean, dust-free and have a temperature between 5 and 35° C and a relative humidity from 20 to 80 % without condensation.

Consumption of food and drink over the desk is inadvisable to avoid waste being accidentally dropped into the equipment and impairing certain functions.

The desk and the monitor should be installed on a table or a console. Like all equipment which includes microprocessors and uses similar technology, the desk is sensitive to the influences of static electricity and it is possible that these influences will affect functioning in certain circumstances. If this is the case, it will be necessary to place anti-static carpets on the floor and perhaps to make the atmosphere more humid. Whenever a carpet is to be used, it must be an antistatic carpet.

In order to avoid wasting time and possibly damaging the equipment, the installer is invited to scrupulously follow the instructions in the diagrams shown, and on the rear panel of the ISIS® based desk.

Before powering up the desk or any of its peripherals, check that the existing voltages are within the limits defined in the TECHNICAL SPECIFICATIONS paragraph.

Note: all connections should be made with the power turned off, otherwise functioning may be affected and can even damage the equipment under certain conditions.

1.4 Power Supply

Like all equipment used in computer systems, your system is sensitive to the characteristics of the network and in particular to variations and voltage peaks.
Consequently, we advise you to use an appropriate line conditioner on this equipment.
Please consult us if you are in any doubt about this.
The line is to be protected by fuse or by circuit breakers and is to be provided with an earth connection for personal safety.

Important Notice for Power Cables
Power cables and connectors are an important part of your equipment and contribute to its safety.
Always use the connector to make or interrupt the link; never pull on the cable.
Do not damage the cable or the connectors in any way; do not pinch or tie together power supply and signal cables, check them at each installation and at regular intervals on a permanent installation.

1.5 Electrical Connection

TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT OPEN THE DESK.
THERE ARE NO USER SERVICEABLE PARTS WITHIN. REFER SERVICING TO QUALIFIED ENGINEERS ONLY. LETHAL VOLTAGES ARE PRESENT INSIDE!
ALWAYS DISCONNECT FROM THE POWER SUPPLY BEFORE OPENING FOR INSPECTION.

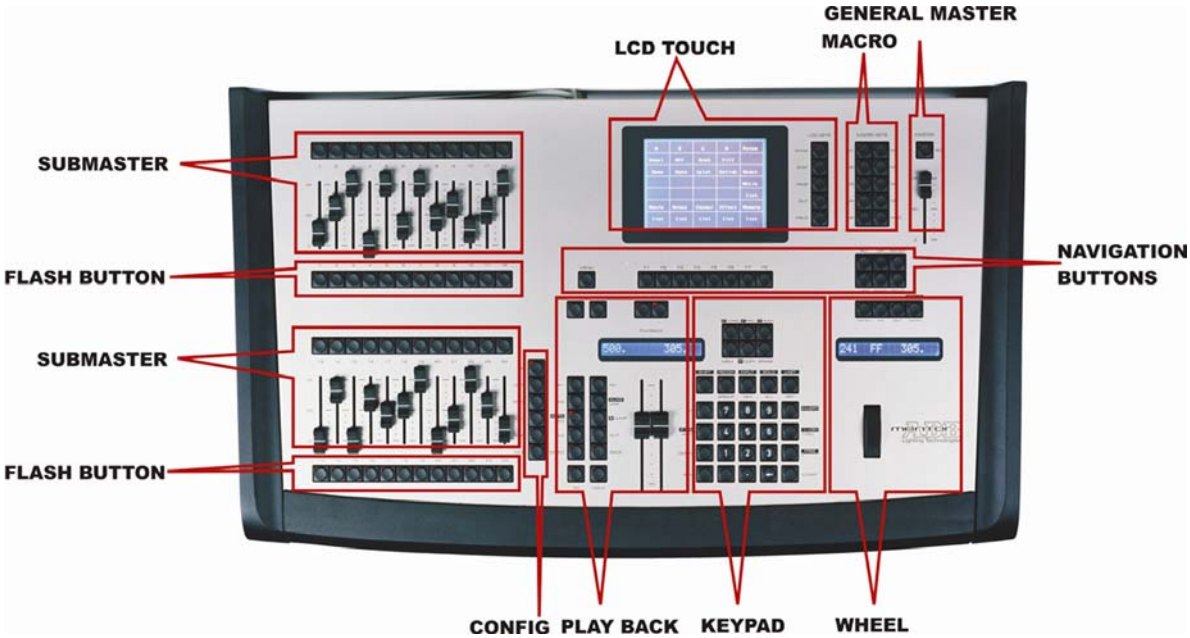
MENTOR-range is professional lighting control systems developed with simplicity of use in mind. In order to maintain the proficiency of the built in safety features, this equipment shall be installed and maintained by qualified service personnel only.

2. MENTOR

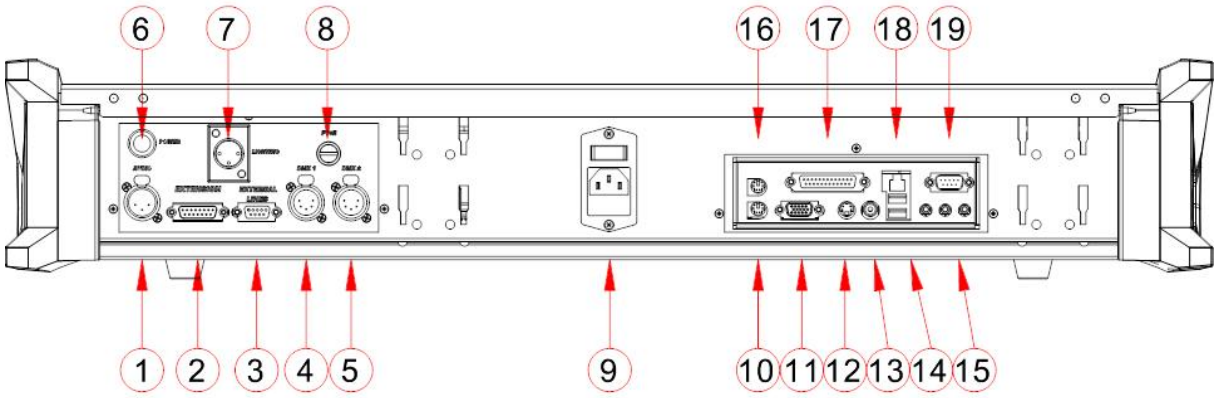
2.1 Technical specifications Desk

- Power supply: 85 to 264 V - 50 / 60 Hz
- The ID label of the console is found on the inside and outside of the bottom panel. It includes Part Number (1AX xxx xxx xxx), serial number, rated voltage, CE marking.
- Dimensions: 727 x 525 x 128 mm
- Weight: 12.3 kg

2.2 Front panel MENTOR



2.3 Back plane MENTOR



1	AUDIO IN	XLR 3 F
2	EXTENSION LINK	DB 15 F
3	EXTERNAL LINES	DB 9 F
4	DMX 1 0UT	XLR 5 F
5	DMX2 OUT	XLR 5 F
6	ON/OFF BUTTON	
7	12V for gooseneck light	XLR 3 F
8	FUSE 12V GOOSENECK LIGHT - Internal fuse auto reset	
9	POWER SUPPLY / POWER SUPPLY SWITCH	
10	KEYBOARD	
11	SVGA	
12	Not USED	
13	Not USED	
14	USB	
15	NOT USED	
16	KEYBOARD	
17	PARRALLEL	
18	LAN ETHERNET	
19	SERIAL	

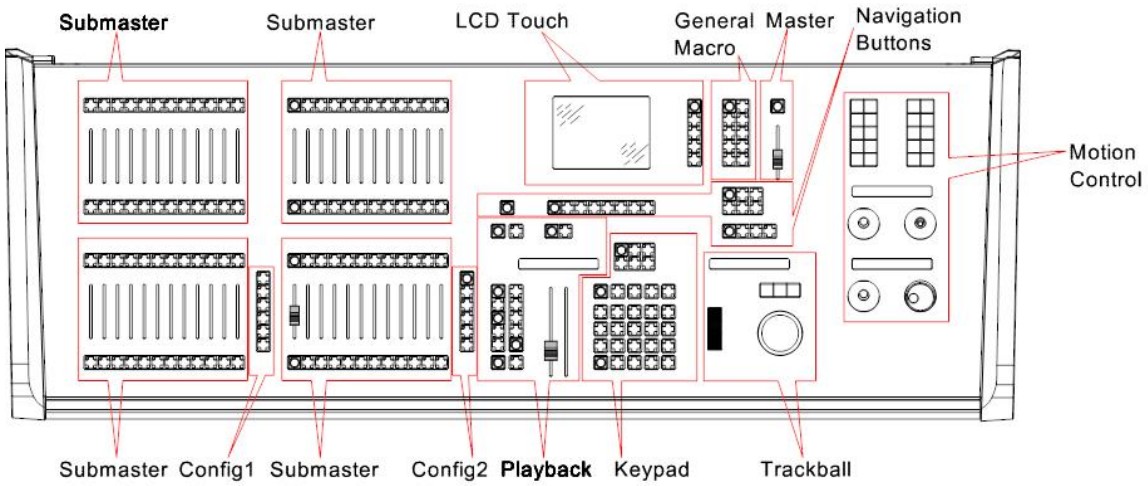
Points 10 to 19 are subject of the motherboard and could change depending revision of motherboard.

3. MENTOR XT

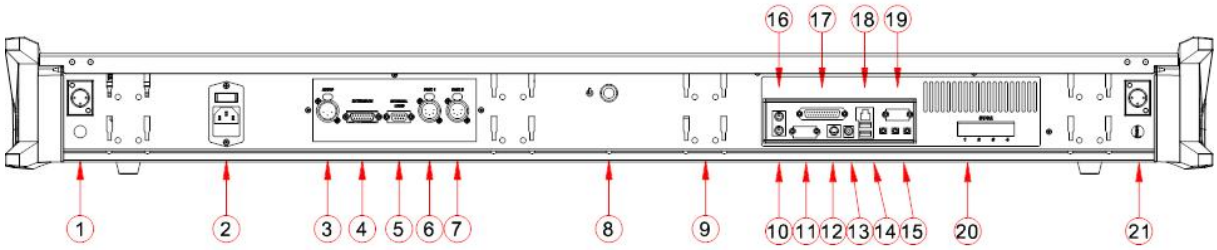
3.1 Technical specifications Desk

- Power supply: 85 to 264 V - 50 / 60 Hz
- The ID label of the console is found on the inside and outside of the bottom panel. It includes Part Number (1AX xxx xxx xxx), serial number, rated voltage, CE marking.
- Dimensions: 1250 x 475 x 130 mm
- Weight: 15 kg

3.2 Front panel MENTOR



3.3 Back plane MENTOR



1	12V for gooseneck light – Internal fuse auto reset	XLR 3 F
2	POWER SUPPLY / POWER SUPPLY SWITCH	
3	AUDIO IN	XLR 3 F
4	EXTENSION LINK	DB 15 F
5	EXTERNAL LINES	DB 9 F
6	DMX 1 0UT	XLR 5 F
7	DMX2 OUT	
8	ON BUTTON	XLR 5 F
9	Fixing point extension module	
10	KEYBOARD	
11	SVGA	
12	Not USED	
13	Not USED	
14	USB	
15	NOT USED	
16	KEYBOARD	
17	PARRALLEL	
18	LAN ETHERNET	
19	SERIAL	
20	2 or 4 SVGA output (Option)	
21	Not USED	

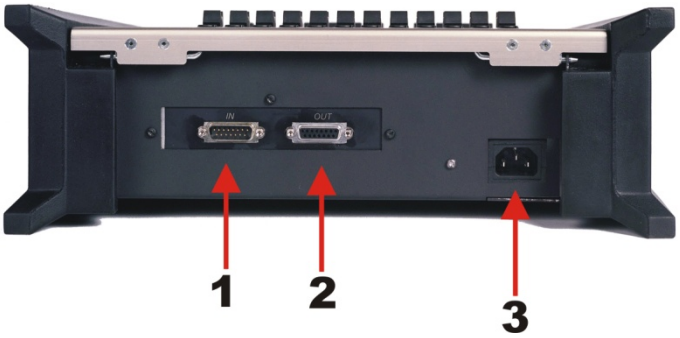
Points 10 to 19 are subject of the motherboard and could change depending revision of motherboard.

4. EXTENSION Wing

4.1 Technical specifications

- Power supply: 230 V – 50 / 60 Hz
- The ID label of the console is found on the inside and outside of the bottom panel. It includes Part Number (1AX xxx xxx xxx), serial number, rated voltage, CE marking.
- Dimensions: 380 x 450 x 130 mm
- Height: 4.7 kg

4.2 Rear panel



1	EXTENSION LINK IN	DB 15 M
2	EXTENSION LINK OUT/THRU	DB 15 F
3	POWER SUPPLY	

4.3 Addressing

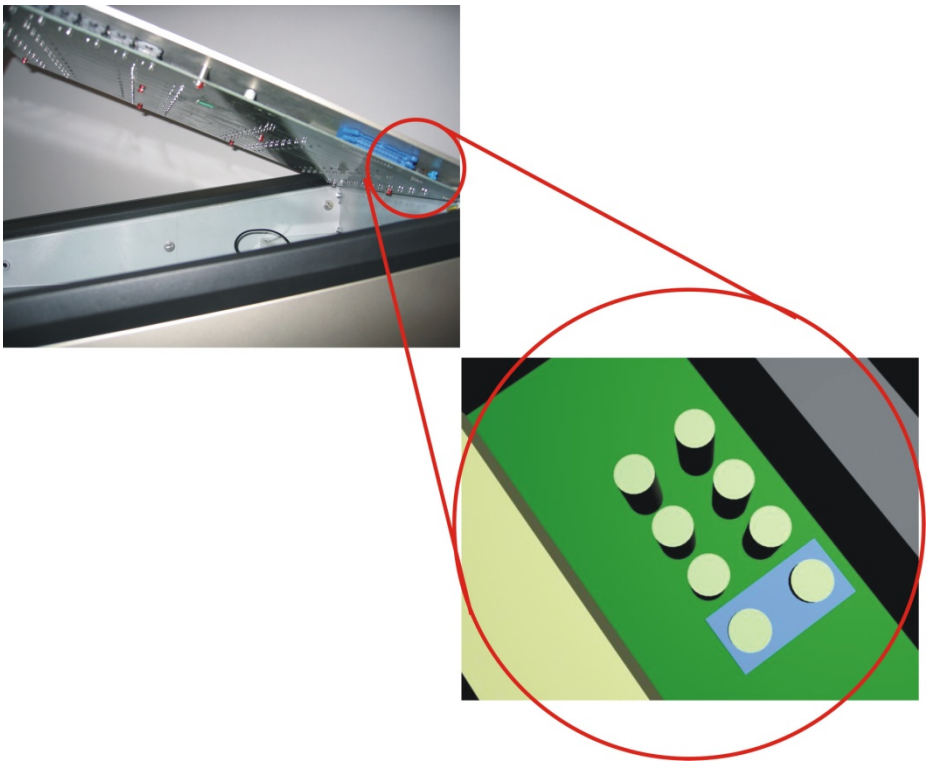
Each MENTOR can be extended with up to 4 EXTENSION Wings. Each of the Wings has its own address. The address is set by way of jumper inside the EXTENSION wing. The factory setting for each Wing is address 1.

In case that more than one Wing is connected to a MENTOR it is necessary to configure the address.

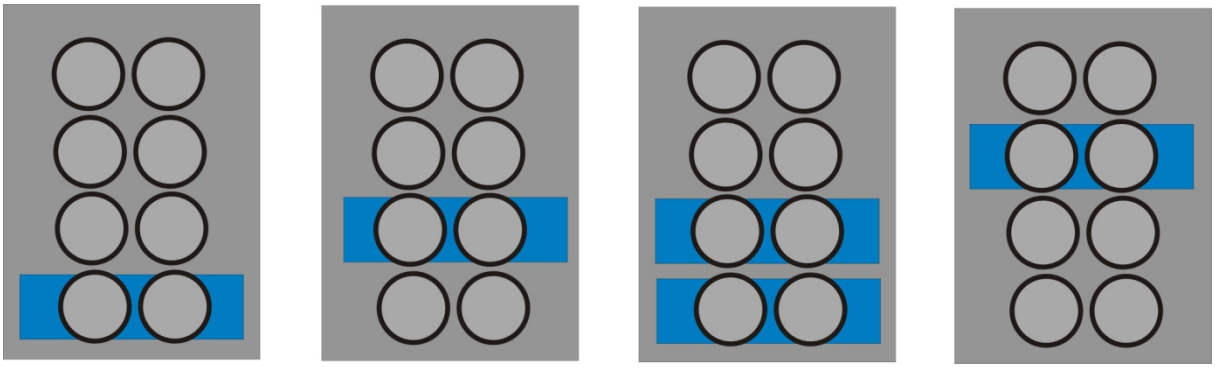
Selecting the address of the Wing

1. Remove the screw on the bottom panel, and open the Wing.

2. The Pin header to address the Wing is placed on the front pcb board. The pin header is below the 26 pin connector.



3. The sketches below show the different settings for each possible wing address. ON Left to right: wing addresses 1, address 2, address 3 and address 4.



4.4 Interconnections between MENTOR and EXTENSION WING(S)

Each wing is standard delivered with:

- an ‘extension link’ cable of 1.5 m
- a set of self’s-adhesive numbering labels
- a power supply cable (230 V)

Up to two EXTENSION WINGS can receive their dc supply voltage from the MENTOR, via the Extension Link cable. Each Wing is fitted with a built-in 230 V power supply.
The two paragraphs below describe how to link the EXTENSIONS:

- one or two EXTENSIONS supplied by MENTOR
- EXTENSIONS using their built-in 230 V power supply

4.5 EXTENSIONS supplied by MENTOR

Only possible in case if using up to 2 wings with the standard extension link cable (delivered with Extension). For any other configuration, please refer to paragraph ‘Extension using its built-in 230 V power supply’.

4.6 Extensions using its built-in 230 V power

Use of the built-in power supply is mandatory:

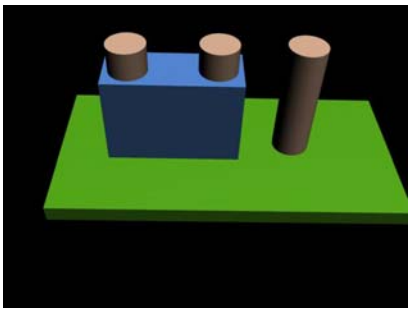
- when you use an Extension cable longer than 1.5 m
- when you connect more than 2 wings to one MENTOR. Use of the built-in power supply is then mandatory for the third and fourth Extension (irrespective of cable length).

The factory setting for each Wing is: External power supply ON, ready to be supplied from a MENTOR. Built-in supply set to off.
(Note: the built-in power supply will not supply dc to other Wings).

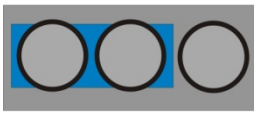
Enabling the external Power supply:

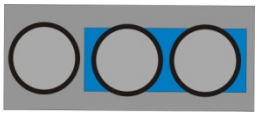
1. Remove the screw on the bottom panel, and open the Wing.

2. The Pin header to select the dc power source address is placed on the bottom pcb board.



3. The sketch below gives the settings for the power supply. Left to Right: built-in 230 V power supply; external dc power supply (factory default setting).





5. EXTENSION Module

5.1 Technical specifications

- Power supply: 230 V – 50 / 60 Hz
- The ID label of the console is found on the inside and outside of the bottom panel. It includes Part Number (1AX xxx xxx xxx), serial number, rated voltage, CE marking.
- Dimensions: 380 x 450 x 130 mm
- Height: 4.7 kg

5.2 Rear panel

1	EXTENSION LINK IN	DB 15 M
2	EXTENSION LINK OUT/THRU	DB 15 F
3	POWER SUPPLY	

5.3 Addressing

Each MENTOR can be extended with up to 4 EXTENSION Wings. Each of the Wings has its own address. The address is set by way of jumper inside the EXTENSION wing. The factory setting for each Wing is address 1.

In case that more than one Wing is connected to a MENTOR it is necessary to configure the address.

Selecting the address of the Wing

4. Remove the screw on the bottom panel, and open the Wing.
5. The Pin header to address the Wing is placed on the front pcb board. The pin header is below the 26 pin connector.
6. The sketches below show the different settings for each possible wing address. ON Left to right: wing addresses 1, address 2, address 3 and address 4.

5.4 Interconnections between MENTOR and EXTENSION WING(S)

Each wing is standard delivered with:

- an ‘extension link’ cable of 1.5 m
- a set of self’s-adhesive numbering labels
- a power supply cable (230 V)

Up to two EXTENSION WINGS can receive their dc supply voltage from the MENTOR, via the Extension Link cable. Each Wing is fitted with a built-in 230 V power supply.
The two paragraphs below describe how to link the EXTENSIONS:

- one or two EXTENSIONS supplied by MENTOR
- EXTENSIONS using their built-in 230 V power supply

5.5 EXTENSIONS supplied by MENTOR

Only possible in case if using up to 2 wings with the standard extension link cable (delivered with Extension). For any other configuration, please refer to paragraph ‘Extension using its built-in 230 V power supply’.

5.6 Extensions using its built-in 230 V power

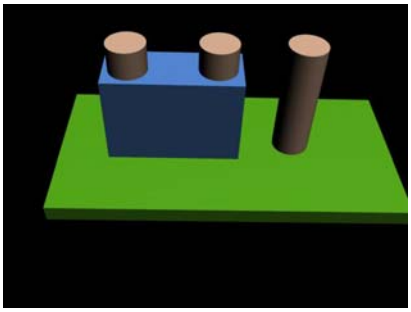
Use of the built-in power supply is mandatory:

- when you use an Extension cable longer than 1.5 m
- when you connect more than 2 wings to one MENTOR. Use of the built-in power supply is then mandatory for the third and fourth Extension (irrespective of cable length).

The factory setting for each Wing is: External power supply ON, ready to be supplied from a MENTOR. Built-in supply set to off.
(Note: the built-in power supply will not supply dc to other Wings).

Enabling the external Power supply:

4. Remove the screw on the bottom panel, and open the Wing.
5. The Pin header to select the dc power source address is placed on the bottom pcb board.



6. The sketch below gives the settings for the power supply. Left to Right: built-in 230 V power supply; external dc power supply (factory default setting).

6. MOTION CONTROL Wing

6.1 Technical specifications

- Power supply: 230 V – 50 / 60 Hz
- The ID label of the console is found on the inside and outside of the bottom panel. It includes Part Number (1AX xxx xxx xxx), serial number, rated voltage, CE marking.
- Dimensions: 380 x 450 x 130 mm
- Height: 4.7 kg

6.2 Rear panel

1	EXTENSION LINK IN	DB 15 M
2	EXTENSION LINK OUT/THRU	DB 15 F
3	POWER SUPPLY	

6.3 Addressing

6.4 Interconnections between MENTOR and EXTENSION WING(S)

Each wing is standard delivered with:

- an ‘extension link’ cable of 1.5 m
- a set of self’s-adhesive numbering labels
- a power supply cable (230 V)

Up to two EXTENSION WINGS can receive their dc supply voltage from the MENTOR, via the Extension Link cable. Each Wing is fitted with a built-in 230 V power supply.
The two paragraphs below describe how to link the EXTENSIONS:

- one or two EXTENSIONS supplied by MENTOR
- EXTENSIONS using their built-in 230 V power supply

6.5 EXTENSIONS supplied by MENTOR

Only possible in case if using up to 2 wings with the standard extension link cable (delivered with Extension). For any other configuration, please refer to paragraph ‘Extension using its built-in 230 V power supply’.

6.6 Extensions using its built-in 230 V power

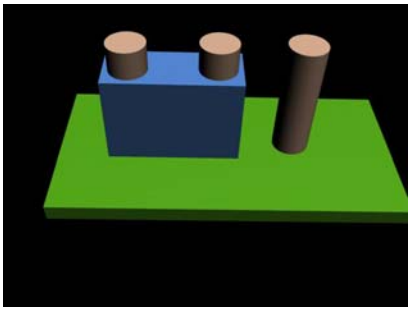
Use of the built-in power supply is mandatory:

- when you use an Extension cable longer than 1.5 m
- when you connect more than 2 wings to one MENTOR. Use of the built-in power supply is then mandatory for the third and fourth Extension (irrespective of cable length).

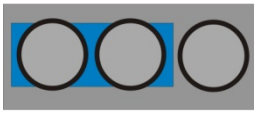
The factory setting for each Wing is: External power supply ON, ready to be supplied from a MENTOR. Built-in supply set to off.
(Note: the built-in power supply will not supply dc to other Wings).

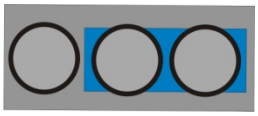
Enabling the external Power supply:

7. Remove the screw on the bottom panel, and open the Wing.
8. The Pin header to select the dc power source address is placed on the bottom pcb board.



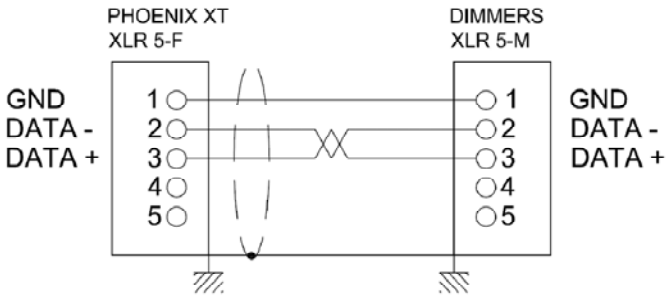
9. The sketch below gives the settings for the power supply. Left to Right: built-in 230 V power supply; external dc power supply (factory default setting).



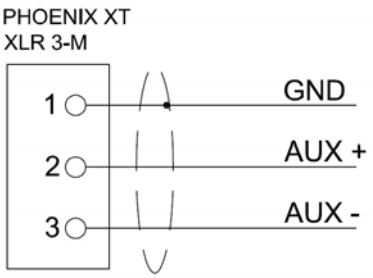


7. Interconnections

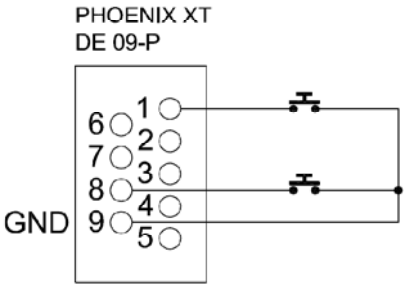
DMX
Cable length: max. 250 m
Cable size: 2 x 0.34 + 0.34 mm², shielded twisted pair



AUDIO
Cable length: max. 250 m
Cable size: 2 x 0.34 mm², shielded



External lines
Cable length: max. 15 m
Cable size: 9 x 0.34 mm²



8. ISIS® Software

The ISIS® software for MENTOR and PHOENIX XT range is distributed via the internet or on a CD-ROM

8.1 Getting upgrades via the Internet

The latest ISIS® software version can be downloaded from the ADB download area.
http://www.adblighting.com/?page=downloads

In the download area you will find the latest release as well as older versions. Under ISIS® 2 Software the following downloads are available.

8.2 Main downloads

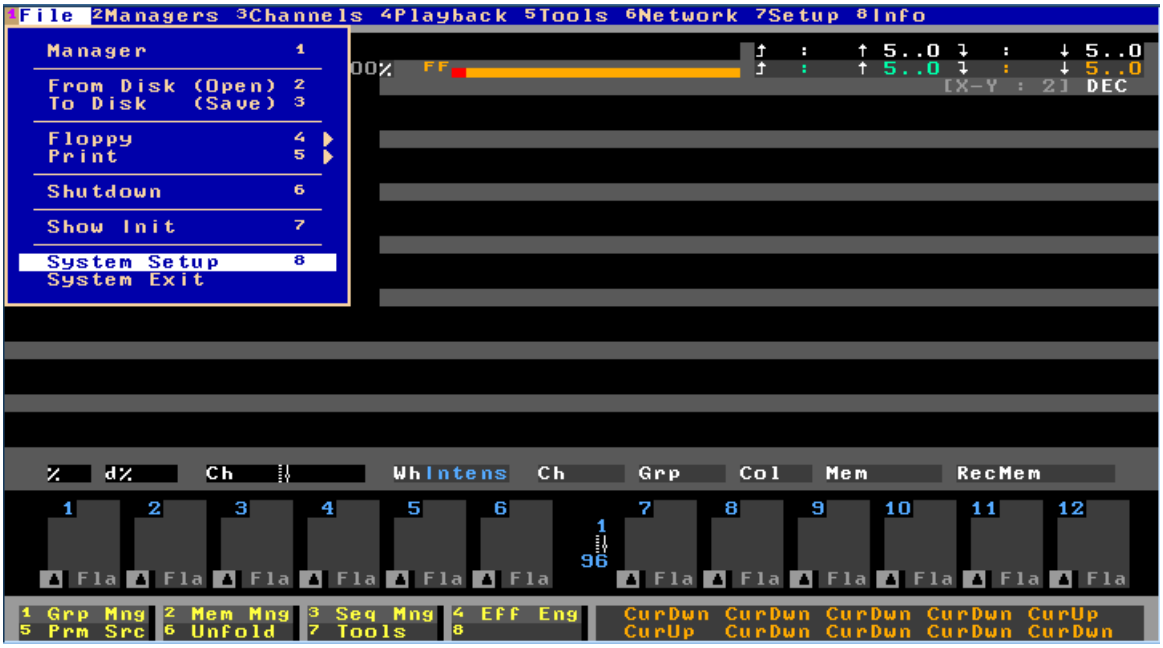
- ISIS® 2 Full - ISO image file
- ISIS® 2 Small - ISO image file
  No Wi-Fi Software, No USB, No documents
- ISIS® 2 USB - for USB installation
  Download "Install from USB Stick" for instructions
- ISIS® 2 – VMWare
  -VMWARE ™ image file
- ISIS® 2.22 Translator
- Install from USB stick
  Instructions to install ISIS® 2 from a USB stick
- BOOTUSBDev
  USB Device boot floppy disk
- Wi-Fi Software
  Wi-Fi Remote Control V1.24 (Build 10)

9. Setup

After LINUX and ISIS® are installed, ISIS® automatically boots after a power up into the **System Setup**. If there are no hardware changes or extra channels, you need to update the name of the desk in de hardware section. If you have changes, you need to initialize these changes in the appropriate part of the Setup program.
After the configuration, select <SAVE and EXIT>; the system will automatically reboot.

Note: It is also possible to System Setup from ISIS® main software.

examples of keystrokes:
<MENU> <F1{File}> <F8{System Setup}> <Enter>



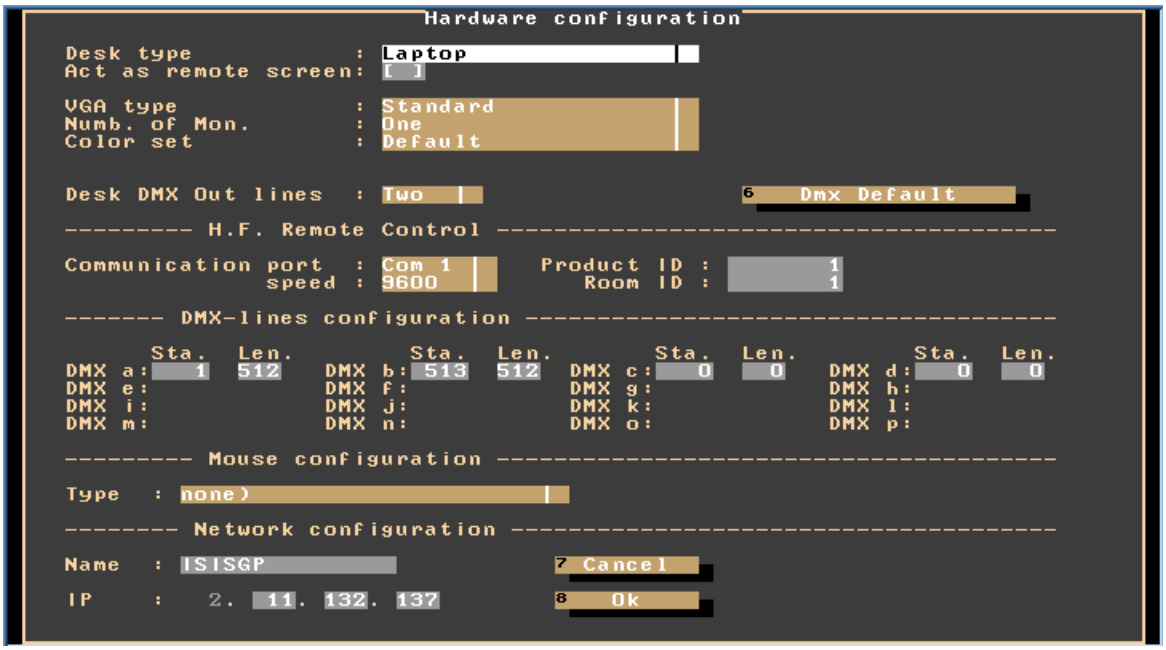
9.1 Software Configuration

Field	Explication
Name	Customer Name
Address	Customer address
Zip Code	Customer Zip Code
City	Customer City
Country	Customer Country
Max Chan.	Standard amount Channels/Instruments Upgradeable by blocks of 120 channels for MENTOR and by block of 512 channels for MENTOR XT Extra channels requires a new software key
Network	Amount of DMX universes trough Ethernet
Use network login	Enable ‘use network login’ only if installation is setup by ADB certified network specialist
Remember password for xx minutes	Related to “use network login”
NetCard SN	**Unique serial number of desk** **Necessary to order a new software Key**
Key	ISIS® software Key In relation with Netcard SN and amount of channels/instruments

9.2 User Configuration

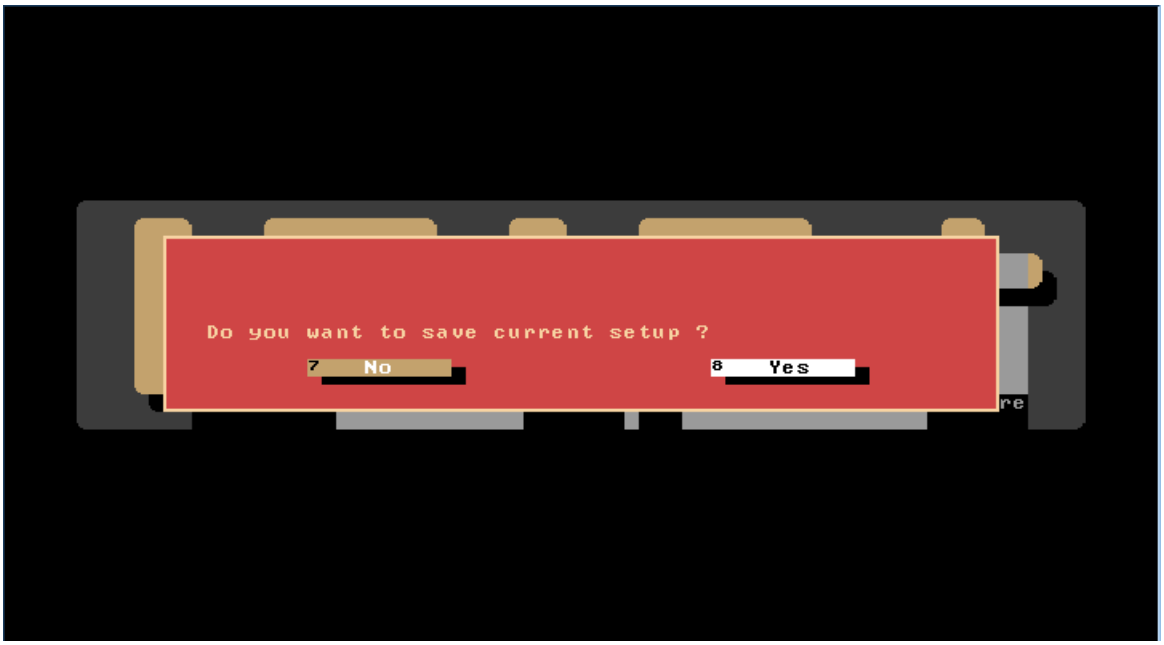
Field	Explication
Language	Selection of Language
New Label	Selection between Latin or Cyrillic character set
Keyboard	Selection of keyboard type
Current Time	
New Time	Possibility to change time
Current Date	
New Date	Possibility to change date

9.3 Hardware



Field	Explication
Desk type	Selection of desk type Laptop does not require a software key
Act as remote screen	Desk will act as a remote monitor – no desk functions available
VGA type	Select type of VGA card: Important => wrong selection will give no display on the screens.[1]
Numb. Of Mon.	Numbers of monitors
Color Set	Selection between different colour sets
Desk DMX Out lines	Standard for MENTOR and MENTOR XT 2
DMX Default	Set the network universes selected to default
H.F. Remote Control	Only for old disabled HF products
DMX-Lines configuration	Possibility to change start address of DMX line and length of DMX line
Mouse Type	Select type of Mouse
Name	⚠ Important to give a name to your desk: Ex: Master
IP	IP address in Artnet – Please do not change unit you are a network specialist

[1] If no displays are show, it is possible to boot your desk in save mode. Press during booting E on you alphanumeric keyboard. The desk will boot in one screen mode and allow you to reconfigure your screens



9.4 SAVE and EXIT

After the configuration, select <SAVE and EXIT>; the system will automatically reboot in ISIS®.

10. Notes

ADB - Your Partner for Light

Belgium **N.V. ADB-TTV Technologies S.A.**
(Group Headquarters) Leuvensesteenweg 585, B-1930 Zaventem
Tel : 32.2.709.32.11, Fax : 32.2.709.32.80, E-Mail : adb@adblighting.com

Deutschland **ADB GmbH** Boschstrasse 3, D-61239 Ober-Mörlen
Tel : 49.6002.93.933.0, Fax : 49.6002.93.933.33, E-Mail : info@adblighting.de

France **ADB S.A.S.** **Sales Office:** 168/170, boulevard Camélinat F-92240 Malakoff
Tel : 33.1.41.17.48.50, Fax : 33.1.42.53.54.76, E-Mail : adb.fr@adblighting.com

Factory & Group Logistics Centre: Zone industrielle Rouvroy F-02100 Saint-Quentin
Tel : 33.3.23.06.35.70, Fax : 33.3.23.67.66.56, E-Mail : adb.fr@adblighting.com

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www.adblighting.com

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